



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

61 Forsyth Street

Atlanta, Georgia 30303

MEMORANDUM

DATE: April 10, 2003

Subject: Review of Coosa River Corridor Fish Data

To: Carolyn Thompson, Site Assessment Manager
South Site Management Branch

From: Michele Burgess, Life Scientist
Office of Technical Services *MFB*

As per your request, I have reviewed the fish tissue PCB congener data for **Coosa River Corridor** with regards to its contribution towards assessing the risk to human health.

A total of 7 fish were collected and sampled at each location. The fish represented different trophic levels (e.g., bottom feeders, predators, etc.) and were presented as fish fillets, which represents the likely portion of the fish that fishermen would consume.

For several of the sample locations, the Polychlorinated Biphenyl (PCB) congeners #156, & #126 are in concentrations in the fish fillets that exceed the screening values based upon the ingestion of the fish by an adult and/or a subsistence fisherman receptor. Furthermore, 1 out of the 7 Aroclors analyzed was detected in the fish fillets. The only Aroclor detected, Aroclor 1260, exhibited fish concentrations that exceed the Region 3 Risk-Based Concentration (risk level = $1E-06$) and Office of Water (risk level = $1E-05$) suggested screening values for total PCBs in all the fish sampled at every sample location¹.

During the planning phase of this study the PCB congener reporting limit was identified as 1.0 ug/kg using Method 8082. This reporting limit for non-detected congeners was above the screening levels for human risk assessments. Resulting in several of the samples exhibiting detection limits that exceed the screening values for the PCB congeners. This is due to the inherent data interpretation problem of the SW-846 8082 method, which is a less sensitive method than the high resolution method SW-846 1668A. Therefore, it is difficult to determine if additional fish tissue samples would have failed the screening evaluation.

1 November 2000, 3rd Edition, EPA 823-B-00-007, Office of Water, National Guidance, Guidance for Assessing Chemical Contaminant Data for Use In Fish Advisories, <http://www.epa.gov/waterscience/fish/guidance.html>
<http://www.epa.gov/reg3hwmd/risk/index.htm>



The following Table is a summary of the findings of the screening evaluation performed on the data.

Location	Fish	Conc. (mg/kg)	PCB	Screening Value (mg/kg)	Receptor
River Mile 2, Rome, Ga (CR1)	Smallmouth Buffalo	2.6e-05	#156	2.5e-05	Adult Fisherman
				6.3e-06	Subsistence Fisherman
Below Hwy 100 (CR2)	Smallmouth Buffalo	6.5e-06	#156	2.5e-05	Adult Fisherman
				6.3e-06	Subsistence Fisherman
Bushy Branch (CR3)	--	--	--	--	--
Lake Weiss, Poole's Ferry (LW1)	Largemouth Bass	2.3e-04	#126	2.6e-07	Adult Fisherman
				3.15e-08	Subsistence Fisherman
	Largemouth Bass	4e-4	#126	2.6e-07	Adult Fisherman
				3.15e-08	Subsistence Fisherman
	Smallmouth Buffalo	1.3e-4	#126	2.6e-07	Adult Fisherman
				3.15e-08	Subsistence Fisherman
Lake Weiss, Bay Springs (LW2)	Smallmouth Buffalo	2.1e-05	#156	6.3e-06	Subsistence Fisherman
Upper Neely Henry (UNH)	--	--	--	--	--
Logan Martin (LM)	Channel Catfish	4.6e-04	#126	2.6e-07	Adult Fisherman
				3.15e-08	Subsistence Fisherman
	Largemouth Bass	2.2e-04	#126	2.6e-07	Adult Fisherman
				3.15e-08	Subsistence Fisherman
	Largemouth Bass	2.2e-04	#126	2.6e-07	Adult Fisherman
				3.15e-08	Subsistence Fisherman
	Spotted Bass	8.6e-05	#126	2.6e-07	Adult Fisherman
				3.15e-08	Subsistence Fisherman

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In summary, there is a trend that the popular sport fish are exhibiting elevated levels of PCBs; however, due to the lack of sizable data and method reporting limit, these data gaps make it difficult to determine the extent of risk to a human receptor from eating the fish.

It would be beneficial to investigate further a subset of the areas previously sampled and to utilize the SW-846 Method 1668A towards a better understanding the possible risk to human health.

I hope this information is sufficient to meet your needs. If you have any questions or if I can be of further assistance, please call me at 404-562-8667.

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